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CAMBRIDGE

AGAINST

BELMONT.

ARGUMENT OF

HON. W. W. WARREN

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BOSTON:
1880.

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ARGUMENT.

Mr. Chairman and Gentlemen:

I suppose I ought to begin by thanking you for the patient attention you have given to this long hearing. I feel no doubt that it has been protracted, and that I am guilty, in some part, of having protracted it. But in a hearing of this kind, where it is necessary for the respondents to ascertain as clearly as possible the ground upon which the petitioners move, and where their examination of witnesses goes over so much of a technical and scientific investigation, it will hardly do to pass it by without some considerable time spent in cross-examination. I am, however, pretty well satisfied, after having reviewed, as far as I thought necessary, the testimony that has been put into this case, that we have spent a great deal of time in it which might perhaps have been saved, could we have known, at the outset, what would be the outcome of the whole investigation.

This, Mr. Chairman and gentlemen, is a petition by the city of Cambridge for the annexation of a portion of the town of Belmont to that city. It appears, from what we can see before us, and from what we have heard, to be pressed by the whole power of the city of Cambridge, led indeed by the water board, but supported by their city government, and carried forward not only by the city solicitor, himself able, and well able, to carry on any controversy of this kind, but also by the aid of one of the most eminent and eloquent lawyers who has ever been called to advocate the cause of any petitioner. Such an amount of strength given to a case would seem to indicate that it had some importance, at least in the minds of the petitioners, and it would seem to require from us that we should attend to it and endeavor to give full weight to whatever was advanced on their behalf; and yet, after having gone through the whole of this long, and, I fear, tedious hearing, I am impressed with the conviction of what I suspected at first, that there is nothing in it at all.

Mr. Chairman, let us begin at the foundation. What is annexa-

tion? What is the meaning of the word "annexation"? Why it is simply a change of the political associations of a people; it is a severance of a community from one municipal affiliation, and attaching it to another.

In annexing a portion of a town to a city, it is a change of the whole form of government. It terminates the independent life of the townsman and merges him in the great body of the citizens. From having the right to vote and speak and act in the affairs of the town of which he is a member, he descends to the position of having only a right to be represented in the councils of a city. Such annexation is for the inhabitants of a town a revolution. It is accompanied with a loss of personal power and influence in affairs; if sometimes necessary, it is rarely desirable. In the case of a town of ordinary size, compact in territory, harmonious in the feeling of its people, themselves orderly, possessed of competency, free from debt, well clothed and fed and lodged, healthy beyond the usual lot of men, provided with schools, highways, churches and all public conveniences, the public offices filled by competent and experienced officers, the land itself fertile and productive beyond comparison, so that in passing along the ways, you ride through a continuous garden, — in the case of such a town, I say, nothing but the most pressing, immediate, inexorable necessity could ever induce a legislature to think of dismembering it, laying the strong hand of the law upon it, and giving over a large and desirable part of it to become one of the outskirts of a great city.

Yet such a town is Belmont, a model town, if every well-ordered town in Massachusetts were not itself a model. Such is the town which Cambridge proposes to divide. Such as I have described are its inhabitants, honest, laborious, intelligent, independent, whom the city of Cambridge proposes to absorb into itself, to share the fortunes of its changing city government, to help bear the burden of its city debt, to have their property loaded with an exorbitant rate of taxation, and to have the privilege of admiring the wisdom and paying for the extravagance of the Cambridge water board.

What overpowering necessity do they show for making

change in the political relations of these inhabitants of Belmont? Is there anything that these inhabitants can gain by the change? Not so. The change will be for them unmitigated injury. Is it because they are unfit to govern themselves, and need the power of a strong city government, with its marshals and police, to keep them in subjection to the law? Not so. Their town meetings are not crowded and disorderly, but quiet and well conducted. Their conduct never calls for the intervention of the police officer. Is it because Belmont cannot furnish schools and highways? Again, no.

On the other hand, do the people of Cambridge need this addition to their population? They tell us they do not, and intimate that they do not want them. Do they want to increase their expenses for schools and highways? Again, no: their taxes are already too high for endurance. Do they want the votes of these people of Belmont? Again, no: they might change the result of an election in a closely contested canvass. Again, is the present line between Cambridge and Belmont unnatural or improper? Clearly not: it is the line of greatest depression, and the same that divides Cambridge from Arlington, and from Medford. But the line newly selected may have some peculiar fitness. Not so: it indicates no natural boundary, and the petitioners have indicated a willingness to change it on each side of the pond.

What, then, is the reason assigned for this extraordinary petition; extraordinary, I mean, when we consider the relation of the parties and the reasons which usually control a legislature in questions of this character?

The reason they give is that they want to preserve and protect the purity of the water of Fresh pond. That is why they want to change the municipal and political complexion of the inhabitants of this district, and to alter the boundary lines between the two places. Was ever so absurd a reason for so grave a request before presented to a legislaure? Let us state their proposition in due form. This is their proposition, as they must state it:

It is necessary to preserve the purity of our well, which at present contains pure water.

The danger of future pollution of our well will arise from the polluting matter which may find its way into the pond from the habitations of men, and the business which may be carried on in the vicinity.

There is no appreciable pollution now, and we do not know when there will be any, and we do not offer to prove that there ever will be any; but if there ever is any pollution, then there will be pollution. There may be pollution which chemistry cannot detect, and which the microscope cannot detect. To be sure, we rely on chemistry when we say that our water is pure now, and on chemistry alone. All our voluminous analyses simply show results of chemical examination. They satisfy us now, and they furnish all the evidence we can ever hope to have of the purity of our water. But they are not sure, because disease may break out and prove that to be impure which we now believe to be pure. The only safe way, therefore, is to remove the possibility of contamination.

I believe I have stated their proposition substantially correctly.

Therefore, they say we desire to preserve the purity of our water, how? By building proper sewers and drains? No. By building an intercepting drain around the pond? No. By removing the sources of filth which now exist and have existed within the limits of the city of Cambridge ever since the pond was taken as a source of water supply? No. By cleaning out the borders of the pond and properly walling it in and protecting it? No. By extinguishing the public rights of bathing, boating, fishing and cutting ice? No. By none of these methods known to civil engineers and boards of health; but by changing the town lines between Cambridge and Belmont, and making a portion of the inhabitants of the latter town vote and pay taxes in Cambridge instead of in Belmont. Fresh pond is to be kept pure by changing the form of government of a portion of its inhabitants from the simplicity of the town to the complexity of the city. In other words, the purity of Fresh-pond water, — it being now pure, — is to be preserved only by changing the territory by which it is surrounded from a town to a city. You will not change the surface of the soil; you will not alter the highways nor the

water-courses; you need not reduce or alter the population or their occupations; you will not change the flow of the surface water, nor alter the height of the column of the water of percolation. Everything will remain as it was, except that everything will be in Cambridge and nothing in Belmont.

Of course, the Cambridge water board and their astute counsel cannot fail to appreciate the absurdity of their position. They must defend it in some way. They know that annexation is suggested in the report of their own experts only in the most incidental way. In fact I should hazard a guess that the word was added to the report in order to meet the requirements of the committee. They knew the reports of their experts. Let me refer to them; I will not read a great deal from them. On the 52d page of the report of the special committee on water supply, which you have had laid before you, are the conclusions of Prof. Wood, who gives a chemical report to the committee appointed by the city of Cambridge. His conclusions are as follows: —

"1st. That Fresh pond alone cannot be relied upon to furnish a sufficient supply of pure water for the city of Cambridge.

"2d. That there are certain sources of contamination which are liable to pollute the water of Fresh pond to an extent dangerous to the health of the community, and which must be removed in order to preserve the purity of Fresh-pond water.

"3d. That the principal sources of pollution of Fresh pond itself can be diverted. The sewage discharging into the pond at Cushing street, and that into Alewife brook and Black's nook, can be conducted away from the pond by means of sewers.

"4th. That, in order to still further preserve the purity of Fresh pond, the city authorities should exercise constant supervision over Fresh Pond Hotel and its adjoining grounds, and the Fresh-pond meadows, and prevent, upon this territory, the carrying on of any business or the erection of any buildings, the refuse from which would tend to injure in any way a source of water supply. And if the city has not this power vested in its board of health, or other board, it should obtain it, if possible, by legislative enactment.

"5th. That the water of Little pond and Wellington brook is, at times, polluted to so great an extent, and with material of so dangerous a character, that these waters are totally unfit to be used as sources of water supply; and since this pollution is of such a nature

as to render it impossible to prevent it from entering these waters, their use should be discontinued, and they should be prevented from entering Fresh pond.

"6th. That some other additional supply should be obtained.

"7th. That if the above-mentioned sources of pollution of Fresh pond be removed, the purity of its water may be sufficiently preserved, so as to render it suitable to be used as a source of water supply for an indefinite period, and also as a storage reservoir, if necessary, for any other additional supply."

Not a word in that about annexation as a remedy. He speaks simply as a chemist, first stating the difficulties with the water, and then he states what it is practicable to do with it. In passing, I will refer to page 36 of his report, in which, speaking of the only other source of pollution which he fears may at some time become dangerous, namely, Niles' slaughter-house, he says, referring particularly to the muck-heap near the slaughter-house: "This matter is, however, under the supervision of the state board of health, in whose hands it may safely be left."

I then pass to Mr. Chesbrough's conclusions, an eminent engineer, against whom, of course, nobody would say a word. He says, —

"First. There is satisfactory evidence to show that, up to the present time, the supply from Fresh pond has been sufficiently pure;

"Second. Comparatively cheap expedients may be adopted to maintain its present purity under existing conditions in regard to population and industries;

"Third. That to provide against future probabilities, it will be necessary to take constantly into Fresh pond sources of supply now admited to but a limited extent because not sufficienty pure; or

"Fourth. It will, as I believe, be found best ultimately to abandon the attempt to make and keep all the present available sources of supply pure, on account of great expense and impracticability, and for an additional supply to take a part of the Shawsheen river, or go to the city of Boston."

These are his conclusions, and in the course of his report he speaks of the facility of draining the Cushing-street district at a very small expense.

Then comes Mr. Barbour's report, in which he strictly confines himself within his own province. He gives the measures showing the amount of water supplied by Fresh pond, the rise and fall of the pond, and the amount that it can be relied upon to furnish. Including the conduit from Wellington brook, it will probably furnish 1,750,000 gallons daily.

Now, on the basis of those reports of the scientific men appointed to examine the subject, the city of Cambridge came here, and, without resorting to any single one of the means of relief suggested by their experts, propose to find their sole relief in the annexation of the territory of Belmont to the territory of Cambridge.

Now, the true remedy for the difficulty under which Cambridge labors can be ascertained from the reports of their own committee, from the general experience of the cities and towns of this commonwealth, and from our common knowledge. What is necessary is to take certain precautions, which precautions require a dealing with the soil and water around the pond so as to exclude the possibility of contaminating substances getting into the pond.

In order to give some plausibility to their position, the committee of the city government, and I suppose their counsel, claim that annexation is necessary to enable them to take these precautions, to deal with the soil and water around the pond; but they utterly failed to show this, and from the nature of the problem they must forever fail to show it.

On the other hand, the truth is, that annexation not only affords no remedy against the danger they apprehend, but, secondly, even if permitted to annex this territory, Cambridge must do the same things after annexation that she could and must do without or prior to annexation. Furthermore, she must, after annexation, come to the legislature for the same grants of power and authority to take or control private property that she must now ask while the territory is in Belmont. She must have the same kind of legislative grant of power over territory now in Cambridge as over territory now in Belmont. Let us see exactly what she wants, and how she can get what she wants. In the first place,

what has she now? By the statute of 1875, chap. 165, p. 731, of the blue-book of that year, Cambridge "may take by purchase or otherwise such land on and around the margin of said ponds, including Fresh pond," (she was authorized to take Little pond, Wellington brook, &c., besides), "not exceeding five rods in width, as may be necessary for the preservation and purity of said waters, and may also take and hold in like manner such lands as may be necessary for erecting and maintaining dams and reservoirs, and for laying and maintaining conduits, pipes, drains and other works for *collecting*, conducting and distributing said waters into and through said city, either by the way of Fresh pond or otherwise."

By sect. 3, it may carry its pipes and drains over or under any water-course, street, railroad, highway or other way, — may enter upon and dig up such road, street, or way for the purpose of laying down, maintaining or repairing pipes or drains, "and may do any other things necessary and proper in executing the purposes of this act."

And by sect. 4, the power is given to Cambridge to do this, and this without reference to whether the road, street or way is within or without the city of Cambridge. And provision is also made in section 4 for cases where they go outside of the town to do this work; and then, in order that there may be no possible want of power to keep the water pure, they have in section 7 of this act this provision:

"Section 7. Whoever wantonly or maliciously diverts the water, or any part thereof, taken or held by said city pursuant to the provisions of this act, or corrupts the same, or renders it impure, or destroys or injures any dam, aqueduct, pipe, conduit, hydrant, machinery, or other works or property held, owned or used by said city under the authority and for the purposes of this act, shall forfeit and pay to said city three times the amount of the damage assessed therefor, to be recovered in an action of tort; and on conviction of either of the wanton or malicious acts aforesaid, may also be punished by fine not exceeding three hundred dollars, or by imprisonment not exceeding one year in the house of correction in said county of Middlesex."

So that, taking that act as it is, the city may exercise all the right of

eminent domain which is necessary to preserve the purity of her water, may take land, and not only that, but any person living anywhere in any town around the pond who does any act which produces impurity in the pond is liable to the city of Cambridge for three times the amount of damage he does, and is also liable to indictment, conviction and punishment for the offence.

And yet, although this has been the law since 1875, I have yet to learn that there has been a single complaint made by the water board of the city Cambridge or a single attempt made to enforce their rights against even the people in their own territory who pollute the waters of the pond.

But that is not all the power that Cambridge has now.

The statute of 1878, ch. 183, contains full and complete prohibition against the pollution of all rivers, streams and ponds used as sources of water supply, and section 4 of said act gives supervision to the state board of health over all rivers and sources of water supply. It can restrain and control the exercise of trades which interfere with the purity of the water, and the statute of 1879, ch. 224, sect. 1, contains a still stronger provision, punishing all persons who interfere to pollute the water which is used as a source of water, supply.

Then again, in the direction of offensive trades, which is made a great bugbear by some people in Cambridge, there is full authority given to the state board of health by the statute of 1871, chap. 167, to prohibit and supervise such establishments.

Then again, the general statutes, chap. 26, sect. 52, at the end, confer similar authority upon boards of health of the towns.

If the committee desire to see the construction of these statutes, and the way in which the general statutes, chap. 26, bear upon the statute of 1871, which confers power upon the state board of health, they will find in the case of *Sawyer* v. *The State Board of Health*, 125 Mass. 182, the whole subject gone into in two elaborate opinions, both given by Mr. Justice Lord. I will simply say as the result of the statutes, and as the result of the opinions and decisions of the court upon it, that I have no doubt that the state

board of health has power, in a proper case, to prohibit the carrying on of any offensive trade in any town of this commonwealth. Or, if it believes that a trade which might otherwise be offensive, could be carried on harmlessly by proper supervision, it has power to supervise it. And the state board of health in this very case of the slaughter-house on this territory has acted upon that view of the law and taken the whole matter under supervision.

Now, it is suggested that the board of health of Belmont cannot be relied upon, that their power over this matter is of no benefit. Mr. Chairman and gentlemen, I repel that insinuation. The board of health of Belmont, in the case where they were called upon, acted with the greatest circumspection, and with the greatest care. They gave the authorities of the city of Cambridge a hearing which lasted more than one day, if I recollect right. The city of Cambridge was represented not only by its able city solicitor, but by one of the most eminent jurists and lawyers of the state, who has honored the office of judge of the supreme court of this state and Attorney General of the United States; and if any men in the State of Massachusetts or any other state in the United States could have presented a case with force, he certainly could do so. And pressed as they were by able arguments and by such apparent interest on the part of Cambridge, the board of health of Belmont gave to this subject a most anxious consideration; and they did not give the license until they were satisfied that the petitioners had proved beyond peradventure that the business could be carried on without the slightest danger to Fresh pond, or the slightest danger to any source of water supply; and if any doubt could exist upon that subject, it was set at rest by the appeal that the city of Cambridge took to the state board of health.

The committee very well know that the state board of health has been instrumental in doing away with more sources of filth and sickness than have ever been done away with by all the combined boards of health in the state before. They were zealous in the cause; they were thoroughly impressed with the necessity, not only of eradicating an apparent and obvious nuisance, but of preventing

the possibility of future ones. And yet, after examining this matter thoroughly and patiently, they did not issue an order of prohibition, because they found no cause for one; and although they did not actually dismiss the petition, because they preferred to keep the whole matter under their supervision, they yet came to a decision, or at least, as the court would say, an "opinion," which they expressed in the following words: "The water supply of the city of Cambridge need not be contaminated from the slaughter-house of the Messrs. Niles Bros., if the directions of the state board of health are thoroughly followed out;" and on the strength of that, they still hold the whole matter under advisement, under consideration.

It has been suggested, and a remark of Dr. Folsom lends some support to the suggestion, that the statute of 1879, which transfers the powers of the state board of health to the present state board of health, lunacy and charity, does not give the present board the authority which the other board had. But if the committee will look at that act, statutes of 1879, chapter 291, they will find the 3d section to be as follows: —

"Section 3. The board shall have all the powers and duties, and may exercise all the functions, of the boards abolished by section one hereof, and of all their bureaus and agents, including the agency thereby abolished, except as hereinafter provided; and said board may assign any of its powers and duties to agents appointed for the purpose, and may execute any of its functions by such agents, or by committees from and by said board."

So that I can have no question that whatever jurisdiction the state board of health had before the passage of the act of 1879 was by that act transferred to and vested in the board of health, lunacy and charity; and section 11 confirms that view:

"All laws applying to the boards, bureaus and agencies hereby abolished shall apply to the board created by section 2 of this act. All acts and parts of acts inconsistent herewith are hereby repealed."

So that I can have no doubt about the existence of a sufficient supervisory power, so far as regulation through the intervention of the

authorities goes. Nothing would be gained, nothing would be lost, and nothing would be changed by annexation.

But suppose that something more is needed. Suppose that, notwithstanding these large powers possessed by Cambridge, more were necessary: they are powers of like nature to those now possessed, and are to be sought from the legislature. They are, if anything, additional powers to take land, cross and dig up highways, lay sewers, make drains, divert water-courses and prevent nuisances, and the exercises of public rights in the pond. For the attainment of all these rights, annexation is not necessary, nor is it any aid. They are all powers that are to be obtained by application to the legislature, and by a grant of the right to exercise the power of eminent domain, and damages are to be paid in case of any injury, whether the land is in Cambridge or whether it is in Belmont. In case of any injury to private property, Cambridge must pay compensation.

The precedents upon this whole matter are very numerous. The precedents upon the other side, of taking a town, tearing it asunder, and annexing a portion of it to a city, and changing its whole form of government, simply because the city wishes it, and against the will of the inhabitants of the town and the owners of the land, I think my friends will find to be very few. I do not know of any. But the precedents by which to regulate the kind of legislation which should be asked for and which should be granted to enable a city or town to obtain or to preserve a pure water supply, are numerous for the last ten years in this state. Suppose you want instances of the extinguishment of the rights of boating, bathing and cutting ice upon a pond from which you take your supply of water. The statute of 1879, chap. 147, in the case of Springfield, extinguished the right of fishing and bathing in the water supply of that city. It was not deemed necessary to annex the town in which the lake lay; it was simply necessary to pass a law prohibiting people from fishing and bathing therein. In 1878, the city of Newton desired to lay a drain or main sewer through a portion of the town of Watertown, in order to reach a portion of the city of Boston,

through whose territory it had before that time obtained the right to construct a sewer to Charles river. I will refer briefly to that act, because it is an instructive act. The first section of that act authorizes the city of Newton, by its board of aldermen, to lay and construct a main or connecting drain or common sewer, which shall have a diameter of not less than seven feet, through a certain portion of the town of Watertown. Section 2 authorizes the city of Newton to take land and buildings.

Section 3 authorizes the city to construct such drain or sewer over or under any water-course, highway, town way or other way; and subsequent sections describe how the work may be done, under the supervision of the Supreme Court, in case any controversy arises; directs the streets to be restored to grade; fixes the liability for damages; provides that the town of Watertown may enter the drain at any time by paying its share of the expenses of it; provides for the appointment of commissioners to appropriation the expenses between Newton and Watertown in case the parties fail to agree. The whole thing is very simple. The legislature of 1878 had no difficulty about it; it was simply a question of detail.

Then you may take for illustration the acts of 1872. All the blue-books of recent years are full of provisions to enable towns or cities to obtain a pure water supply. Take the acts of 1872, and you will find Watertown, Newton and Brookline, in three successive chapters, I think, or nearly so, authorized to take water from Charles river. In the case of Newton, the water could be obtained within its own limits; in the case of Waltham, it was authorized to take either within its own limits, or within the limits of the town of Weston; and Brookline, I think, took within the limits of Newton or Needham. If you look at these acts you will find that there is no difference in their general phraseology, whether the water is to be taken within or without the limits of the town. The rights conferred upon the towns are the same in all cases, and the obligations are the same. It was never dreamed of by anybody that there was any need of the annexation of territory, or of changing the political relations of the people, in order to obtain a supply of pure water.

In the same volume you will find the cases of Wakefield and Stoneham, the pond being in Wakefield. West Roxbury was authorized to take water from Charles river, outside of her own limits. Winchester was authorized to take water from Wedge pond, I don't know whether within its own limits or not. Springfield was authorized to take water within its own limits, or within the limits of the town of Wilbraham. Lawrence from its own limits, or within the limits of the town of Methuen. I take these cases from the blue-book for the year 1872, the first one I put my hand on, and we know that the legislation of the last few years is full of examples of this kind; and all these examples show completely that there is an entire and manifest distinction between the legislation which Cambridge *requires*, if any, namely, legislation which shall enable her to exercise certain powers in and over Fresh pond, and upon the territory and property of individuals, and the legislation which she *asks for*, which is legislation which shall enable her to exercise political power over the residents upon certain territory.

But the great and leading illustration in the whole of this matter of water supply is the city of Boston itself. Just see what Boston has done. It has built two conduits from Cochituate lake to Brookline; two reservoirs — one in Brookline, and one in Brighton and Newton. It has laid numerous mains through Brookline; it has built an intercepting sewer all round Chestnut hill reservoir, and a 100 feet roadway outside of that. It has walled in its reservoir with heavy stone walls, backed by a puddle bank of sufficient width for a country road, and as deep as the bottom of the reservoir; it has built dams and storage basins of great capacity in Framingham to control and store the waters of Sudbury river; connected the waters of Sudbury river through Farm pond with those of Lake Cochituate, and now proposes to lay a main through Cambridge to supply the Mystic basin with pure water; and all this without annexing or asking to annex a foot of territory to its municipality. It is true, part of Brighton has been annexed to the city of Boston, and a small part of Newton, but that was not done until years after the work was accomplished.

Annexation had nothing to do with the water supply. Brighton, to be sure, was annexed afterwards; Brookline has not yet been annexed. All the basins of the city are in Framingham, except one, and all of its conduits and mains run through the territories of other municipalities, without any difficulty, without any conflict, with the utmost harmony of feeling, so far as I know, upon the part of the authorities of the city of Boston and the authorities of the various towns.

The use Boston proposes to make of the Mystic basin shows what use Cambridge can make of Fresh pond, and what its treatment of that pond should be. I say the experience of Boston is valuable, in the first place, as showing that annexation is not necessary, and it is valuable, in the second place, as showing what use can be made of the waters of Fresh pond. Fresh pond is soon, and for most of the time hereafter, to be used, if at all, as a reservoir for the storage, rather than as a source of supply, of water; and in this I think Professor Wood substantially agrees with me, because he evidently has had his mind upon it; and all the experts who have looked upon this question are of opinion that as a source of water supply Fresh pond cannot long be relied upon. It must be treated, I say, as a reservoir, protected from the influx of all surface water, and of all water flowing through brooks which receive the drainage of the territories through which they flow, whether those territories are within the municipal limits of Watertown, Waltham, Belmont, Arlington, or Cambridge itself. It must be cleaned out and walled in, and a drain constructed around it to intercept and carry off all surface water and brook water.

It may be said that this will reduce the supply of water in Fresh pond. Undoubtedly it will, but the authorities of the city of Cambridge concede that they cannot take the supply which they relied upon from Little pond and Wellington brook. It is very certain that they cannot take a supply from the little rivulets that you have seen, some of you, to-day, that flow in around the pond, and carry in the filth from the pig-styes, drains and privies in the vicinity. They cannot rely upon it; they can use Fresh pond as a source for what it is able to supply, and beyond that it may be used as a

reservoir. They may then be furnished with a supply of pure water from any suitable source. The cheapest and easiest to obtain would be that suggested by Mr. Chesbrough, by contract with the city of Boston. If at any time it should be feared that it had become an improper reservoir, on account of what might percolate into the pond, then it would have to be abandoned.

But I hold that Fresh pond bears the same relation to Cambridge that the Chestnut-hill reservoir bears to the city of Boston, and both should be treated as storage reservoirs. It makes no difference that a large quantity of water, in the case of Fresh pond, comes from springs in the bottom, that is, through percolation, if you please, while all the water in the Chestnut-hill basin is brought down by a conduit. My belief is, that the purity of the water of Fresh Pond is due to the fact that it comes from a long distance; through underground lines of communication, to be sure, but still from a long distance. For, if you take the result of the analyses as given by the witnesses, it appears that there is no water so pure, that analyzes so well as the water of Fresh pond, nearer than the source of Frost brook which is at the top, as I understand it, of Arlington Heights. Now the distance from which Fresh pond is fed, nobody can by possibility tell. "Percolation" is a term used to define the passage of water through soil; but the law governing the passage of the water of percolation is the same law which governs the passage of any other water, where it is perfectly free to move in two directions. The law is that water will seek its level. Water in the soil and water in a pond will seek the level. There will be a difference, if the water in the soil tends towards a pond, owing to the resistance offered by the character of the soil. But suppose the soil to be perfectly porous to water, then water will stand at the same level in the pond and in the soil, in all probability. But you may go further; the general law in regard to the pressure of water is, that the pressure is equal to the height of the column of water. That is to say, it makes no difference whether the column of water is a foot in superficial area or only a sixteenth part of an inch. The pressure of a column the

sixteenth part of an inch is just as strong as the pressure of a column a foot in area. It is height and height alone that determines it.

Now the question where the water of Fresh pond comes from could only be determined, if we could know, for miles and miles around the pond, the sources of water and the freedom of communication between those sources and the bottom of this pond, for, otherwise, we have no data from which to arrive at a conclusion. I have no idea that any amount of water percolates into this pond from these meadows, not the slightest. It may be that some gets in through the gravelly formations about the pond; but if it does, it comes in from the remote parts of Belmont, away beyond this territory that they propose to annex, and so the danger to water from the percolation from land can never be wholly guarded against. Annexation would, of course, have no effect upon it. The water would run the same after annexation as before. A particular ascertained source of pollution could be abated before annexation as well as after; there is law enough for it now. No such source of pollution can exist to-day in any part of this commonwealth, if the authorities charged with the protection of the water supply use proper diligence in protecting it. I will say here, in passing, that I am surprised at the want of diligence on the part of the Cambridge authorities in regard to the sources of pollution within their own territory. They made a scapegoat of the Niles Brothers' slaughter-house, and although a year has elapsed since the board of health failed to find in it any serious ground of apprehension, yet the city authorities still direct their whole energies and complaints against it, and pass over the crying evils within their own border.

The mention of percolation leads me to say that the annexation asked for has no relation to the territory from which there may arise danger to the purity of the pond, if from anywhere, through percolation.

It is in testimony that the whole area of Belmont (and they might have added the whole of the territory of Arlington, and the whole or a great portion of the territory of Watertown and Waltham) is highly cultivated garden land, manured by great quantities of night-

soil; the very thing which, according to the testimony, contains most certainly the germs of disease. Those territories are all high, and during a certain portion of the year the drainage of those territories runs into Wellington brook and other brooks above Fresh pond, and the surface water may more or less flow into the pond itself. The remedy for that, I should say, is to construct an intercepting drain around the pond. Portions of the water must sink into the ground, and, being at a higher level, it would by the force of gravity tend downward to seek the lowest level which can be found, and that lowest level will be the pond and the meadows around the pond; for I agree that the meadows around the pond are, in a certain sense, to be treated as subject to the same influences. I have no doubt that the water level in the meadows and the water level in the pond respond at the same time to a rainfall, but they do not respond to any mutual action between each other: they respond to a similar effect exerted upon them by the rainfall over a similar territory, and while some of the water of percolation from the high lands of Arlington, Belmont and Waltham affects the levels of the pond and raises it to an appreciable extent, other water of percolation affects the water levels in the soil of the meadows and raises those an appreciable extent. The evidence of that is perfectly conclusive, — there is no conflicting testimony. Mr. Elliot may be sneered at by my friends on the other side and by the Cambridge newspapers as much as they please, but Mr. Elliot showed a clear comprehension and knowledge of his subject; and that there might be no mistake, he took his data and facts from the very minutes furnished us by the city of Cambridge itself. And he found this, that while he conceded that in the neighborhood of Black's nook, the levels of the wells sunk in the soil would show that, for a short distance, there was a tendency of the water towards the pond, yet he is no less satisfied that when you got to the meadows and took the levels through the meadows, and down towards Mystic river, everywhere the water stood lower as you receded from the pond; and the very water-line given in this book, amplified by the soundings kindly furnished by Mr. Barbour at my request, shows that, while the water in the pond was

pumped down and lowered from day to day, the water in Alewife brook was stationary during the same time. No better proof can possibly be given that there was no percolation from the meadows towards the pond, because the level of the brook would fall with the level of the pond water, if the two were in free communication. The inference is irresistible that the soil between those meadows and that pond is a bed of clay, perfectly impervious to water, so that the danger from the percolation of water into Fresh pond does not arise from any water that falls on the meadows, or percolates into the meadows, but arises from percolation through the gravel and porous material which surrounds the northerly, westerly, and southerly side of the pond.

I have not said anything in particular about the slaughter-house, because, practically, I understand they concede that the only possible danger that can result from that slaughter-house will arise from the "muck heap." The state board of health have furnished a sufficient answer to that. The amount of drainage through that three-inch pipe leading from the slaughter-house to Alewife brook is a mere bagatelle as compared with the amount deposited by the three sewers of Cambridge in the same brook. It is not worth talking about. All I can say about that is, that the same remedies that Cambridge must adopt to preserve a pure water supply, namely, to build a sewer for herself, will give relief to all possible dangers from Belmont. She says she does not want to be put to the expense of building a sewer in Belmont. They come up here, in the first place, and complain of the Cushing-street district, and say that the people who occupy those houses pollute their water; and then when those people come up here, unanimous against annexation, they say they are willing to leave them out. That shows that annexation has nothing to do with it. The real thing is, to build a sewer to take the drainage of that district and carry it into the main sewer which Cambridge builds, and Mr. Chesbrough says that can be done at a very small expense. Now, they come here and abandon the whole ground of their proceeding when they agree to leave out this people. They cannot contend that drainage is any less necessary when they

leave those people in Belmont than when they take them into Cambridge. They must drain off their sewage in Belmont, and they would have to drain it no more and no less in Cambridge. Then what is the use of annexation when it is abandoned so readily in the case of this district?

I say then, if the water of Fresh pond is to be protected against impurities arising from percolation, you must annex the whole of Belmont; and when you have annexed it, you must do something more than drain it — you must stop the cultivation of the land; and that means driving out the population; and you cannot replace them with any other population unless it is a population of people from the city, who will cease to cultivate the land and adopt the modern improvements in their house drainage. Then if the city of Cambridge will build a series of drains all over the present territory of Belmont, they must do the same in Arlington, the same in Watertown, and portions of Waltham. It means, therefore, if there is any logic in their argument, that they fear danger from percolation, and that that danger is imminent; it means, not annexation, but depopulation, so far as the present inhabitants of the territory devoted to market gardening are concerned, and there is no logic that will stop short of this.

Now, I know that there is an earnest desire expressed here to do something. It was originally to annex that territory shown on the map. It has finally dwindled away, so that all that it is proposed to take, I believe, is the property of the Hittinger estate, and the property of the Niles Brothers, and a very few houses on the territory. Well, now, I suppose that the water board want to accomplish something. They have attempted, before several legislatures, or the city has on their behalf, to do something. and every attempt has been met with failure. They have attempted in various ways to do something to satisfy the people of Cambridge in regard to their water supply, and thus far the only result has been a very great expenditure from a large part of which they must, as they confess, abandon all hope of benefit. I suppose that it will be a sort of triumph to them, if they can accomplish this result and get some

bill for annexation. It would be a personal gratification, I suppose, if they could claim that they had brought these people, the Messrs. Niles, within the jurisdiction of the local board of the city of Cambridge; but I think, gentlemen, that if ever a controversy were to arise in respect to that place — I trust there never will — it would be a very hard tribunal for the Messrs. Niles to be subjected to, when that tribunal is already committed beforehand to do away with their establishment, whether it be well conducted or whether it be ill. I think they have made a mistake in the legislation they ask for. We were served with a notice that they proposed to come up here and get leave to lay sewers in Belmont. To that we have not the slightest objection. Any facility that the citizens of Belmont, collectively or individually, can give the citizens of Cambridge, or their water board, to lay sewers or drains, or do anything that will make them feel satisfied and contented about the water of Fresh pond, we shall be glad to have done; but we do not feel called upon to have our citizens set off to another municipality; we do feel called upon, on the other hand, to maintain our town in its integrity. As I said, the reasons which generally govern in cases of annexation do not exist here. The reasons which are given for annexation are not sufficient reasons for it, and the remedy which the city of Cambridge needs, to make its water reservoir what it should be, is not a remedy through annexation, but a remedy through sanitary legislation, and through proper power of control over Fresh pond itself.

We have said that we will appoint police officers, as many as they want, to serve around the pond, and they may select them, except that the selectmen of Belmont ought to have the right to know that they are proper men. But we object first, last and all the time, to changing our town into a city, or any portion of it. We stand here believing that we are one of the few towns remaining in the vicinity of Boston which has preserved the character of the old Massachusetts town. We have that homogeneous population which goes to town meeting, where each man is equal to every other man, and each man can say his say, and vote his vote, and have his will expressed regularly, after patient investigation, and can feel that he himself is an

independent citizen; and we do not wish to change our fate, or the fate of any of our people, so that they may have no right except once in a year to go to some smoky ward-room and vote for a caucus ticket for an alderman and member of the common council. We do not believe that Cambridge will get any benefit that will be at all commensurate with the loss that our people will sustain. We know that our people will be subjected, as I have said once before, to simple injury. We see no right in this thing, we see no reason in it; we see no good in it to the people of Cambridge, and only harm to the people of Belmont.

Mr. Chairman, thanking you and the gentlemen of the committee for your patience, I leave the matter in your hands.

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